

From glowbugs@theporch.com Wed Jan 10 06:58:23 1996
Return-Path: glowbugs@theporch.com
Received: from uro (localhost.theporch.com [127.0.0.1]) by uro.theporch.com
(8.7.3/AUX-3.1.1) with SMTP id GAA28859; Wed, 10 Jan 1996 06:50:38 -0600 (CST)
Date: Wed, 10 Jan 1996 06:50:38 -0600 (CST)
Message-Id: <199601101250.GAA28859@uro.theporch.com>
Errors-To: ws4s@midtenn.net
Reply-To: glowbugs@theporch.com
Originator: glowbugs@theporch.com
Sender: glowbugs@theporch.com
Precedence: bulk
From: glowbugs@theporch.com
To: Multiple recipients of list <glowbugs@theporch.com>
Subject: GLOWBUGS digest 72
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas
X-Comment: Please send list server requests to listproc@theporch.com
Status: 0

GLOWBUGS Digest 72

Topics covered in this issue include:

- 1) FS Heath single band radios
by KE8NEfix@aol.com
- 2) Re: measuring large chokes
by steve@hi.com (Steve Byan)
- 3) Re: measuring large chokes
by steve@hi.com (Steve Byan)

Date: Tue, 9 Jan 1996 13:03:56 -0500
From: KE8NEfix@aol.com
To: boatanchors@theporch.com
Subject: FS Heath single band radios
Message-ID: <960109130353_111076172@emout05.mail.aol.com>

Hi Gang,

Several projects are gong to have to go by the way and so I've decided to let somebody else have some fun. I have 5 Heath single band radios that are for sale. 3 HW-32/A's [20 meters] and 2 HW-12/A's [80 meters]. These are what I would term parts radios. One has a bent front panel, all are either missing some knobs or have the wrong ones there. Otherwise they appear to be complete. If someone wanted to take them all, you could easily end up with 2 working radios and probably more. They may even work, I don't know. I have no power supplies but I am willing to move them reasonable. \$30.00 a piece shipped or \$125.00 for all 5 shipped. I do have manuals and can supply some

info. Let me know

Thanks

KIM

ke8nefix@aol.com

Date: Tue, 9 Jan 1996 14:51:13 -0400
From: steve@hi.com (Steve Byan)
To: glowbugs@theporch.com
Subject: Re: measuring large chokes
Message-ID: <v0213050cad18617e69e5@[140.243.30.128]>

>Any tips on how to measure the inductance of a choke in the 2-20 H range
>with "material you might find around your home"? My multimeter only
>measures dc amps, otherwise I was thinking of using a current-limiting
>resistor and hooking the thing up to the 117v line. Could I use some sort
>of resistive bridge?

You'll probably draw way too much current if you hook the thing up to 117VAC. Use a 6.3 VAC transformer and a series resistor. Assume a 2 Henry choke and calculate the size of the series resistor to keep the current within the power rating of the choke winding.

To measure AC current with your multimeter, put a resistor in series with the inductor and measure the AC voltage across the resistor, and the AC voltage across the choke. Use ohms law to calculate the current through the resistor given the voltage across it and its resistance. Apply ohms law again using the current and the voltage across the choke to calculate the magnitude of its impedance.

Next measure the resistance of the choke at DC. Now the magnitude of the choke impedance (which you measured above) is equal to the sum of the square of its resistance and reactance. Use algebra to solve for the reactance given the magnitude of its impedance and its resistance. Finally, the reactance of an inductance is the reciprocal of two times pi times the frequency times the inductance. Given the frequency (60 Hz) and the reactance, solve for the inductance.

A caution: the inductance of an iron-core choke is strongly-dependent on the DC current flowing through it. The above procedure measures the inductance at zero DC current. If you're using this choke for a power supply or as an audio frequency plate load choke, then you will need to measure its inductance at the same DC current level that you expect in your circuit. See Terman's "Measurements in Radio Engineering" for a description of some bridge circuits suited to measuring inductance with a given DC

current through the choke.

Regards,
-Steve

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Date: Tue, 9 Jan 1996 15:08:23 -0400
From: steve@hi.com (Steve Byan)
To: glowbugs@theporch.com
Subject: Re: measuring large chokes
Message-ID: <v02130510ad186d162349@[140.243.30.128]>

Bruce Robertson <brucero@epas.utoronto.ca> wrote:
>>measures dc amps, otherwise I was thinking of using a current-limiting
>>resistor and hooking the thing up to the 117v line. Could I use some sort

I wrote:
>You'll probably draw way too much current if you hook the thing up to
>117VAC. Use a 6.3 VAC transformer and a series resistor. Assume a 2 Henry

Sorry Bruce, I misread your post to say "directly connect the choke up to the 117v line". Watch out for the power rating on the current limiting resistor.

Regards,
-Steve

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End of GLOWBUGS Digest 72
